Material flow

The material flow of our company in FY 2022 is reported here. To provide society with value through our business activities, we have inputted the following resources. On top of that, target values are set and activities are underway to reduce the environmental load generated (KPI). Further, Scope 1 emissions from MAEDA CORPORATION's construction work are calculated while including CO_2 emissions from fuels consumed by our subcontractors and those from the transportation of soil generated from construction and construction byproducts, in accordance with the aggregation method of the Japan Federation of Construction Contractors.

Input resources

Energy

Construction*1 Monthly average operation | Number of field offices: 280 | Total workforce: 2,875,000 people

Electric energy	47,566,000 kWh	LPG	51 t	City gas	3,145 ㎥
* Electricity generated 100% from renewable energy was used.		Light oil	24,563 kl	Gasoline	308 kl
A-type heavy oil	20 kl	Kerosene	153 kl	Clean water consumption	353,757 ㎥

Office*2 Base: 40 places | Total workforce: 546,000 people

Electric energy	5,428,000 kWh	Gasoline	242 kl	Light oil	2 kl
* Electricity generated 100% from renewable energy was used.		Clean water consumption	23,817 ㎥	Kerosene	2 kl
				City gas	47,232 ㎥

Equipment and materials

Construction

Concrete	749,000 ㎥	Steel material	96,000 t	Cement	18,000 t

★ Green procurement amount
- Material system 13 items
- Exterior material and interior material system 7 items
- Equipment system 10 items

* For details, see the "List of green procurement amount" shown below.

Office

Paper purchase volume	7,603,000 sheets

List of green procurement amount

Blast furnace concrete	147,818 ㎥	Low-E glass	24,269 ㎥	Automatic control blind	8 locations
Fly ash concrete	68,252 ㎥	Multi-layered glass	22,353 ㎥	Earth thermal utilization system (heat pump)	0 kW
Recycled concrete	40 ㎥	Rooftop greening	1,660 ㎥	Photovoltaic power generation	17 kW
Electric furnace H-steel, steel sheet pile, and reinforcing steel	93 t	Wall greening	272 ㎥	Solar heat utilization	0 ㎥
Reutilization of construction generated soil	26,281 ㎥	Regenerated wood board (particleboard, fiberboard, woody cement board)	134,204 ㎥	Wind power generation	0 kW
Treated soil recycled from construction sludge	15,252 ㎥	Domestic wood finishing material	18 ㎥	Fuel cell	0 kW
Recycled aggregate, etc.	153,631 t	Non-fluorocarbon insulation material	554,094 ㎥	LED lighting	11,619 units
Recycled hot asphalt mixture	3,353 t			EM electric wire	112 m
Alternative form	8,646 ㎥			Water-saving toilet bowl	81 sets
PC material	54,708 ㎥			High-efficiency air conditioner	0 units
Domestic timber, structural material	452 ㎥				
Domestic timber, temporary usage	0 ㎥				
EPO certification products	1.995 billion yen				

Scope 3
Energy-related activities
13,053 t-CO_2
Employees' commuting
1,713 t-CO_2

Scope 3
Purchased products and services
585,581 t-CO_2
Transportation and delivery (upstream)
4,540 t-CO_2

INPUT

INPUT

Business activities*3

Scope 3
Use of sold products
1,702,279 t-CO_2
Disposal of sold products
82,604 t-CO_2

The value created in society

Civil engineering	Road	35.8 billion yen
	Forestry conservancy and river improvement	17 billion yen
	Railroad	19.4 billion yen
	Water and sewage	8.7 billion yen
	Land development	9.5 billion yen
	Harbor/airport	3.1 billion yen
	Electric line	0 billion yen
	Others	57.9 billion yen
Building	Residence	75.5 billion yen
	Education, medical care, etc.	22.8 billion yen
	Factories, warehouses, etc.	59.6 billion yen
	Office and government buildings	26.2 billion yen
	Commerce, lodgings, etc.	9.5 billion yen
	Others	21.7 billion yen

OUTPUT

OUTPUT

Environmental load*4

Greenhouse effect gas / Air pollution

Construction

CO_2 emissions	73,718 t-CO_2
(due to the transportation of waste and generated soil	5,366 t-CO_2)
(due to power usage	0 t-CO_2)
Nox	433 t
Sox	65 t

Office

CO_2 emissions	678 t-CO_2
(due to power usage	0 t-CO_2)
Total CO_2 emissions	74,396 t-CO_2

Construction byproducts

Construction

Construction waste	585,741 t
(industrial waste subject to special management	236 t)
Construction generated soil	1,260,000 ㎥
Number of cards of a manifesto issued	103,437 sheets

Office

Non-industrial waste	85,338 t
Total waste	671,079 t
Discharge*5	35,009 ㎥

Recycling

Recycled construction byproducts

Concrete	209,511,000 t
Asphalt concrete	69,743,000 t
Wood waste	19,355,000 t
Construction sludge	210,516, 000 t
Recycling rate (including dismantling)	97.8 %
Recycling rate (excluding dismantling)	97.3 %

Recycled in society

Scope 3
Transportation of byproducts
8,455 t-CO_2

Final disposal

Final disposal amount of waste	12,733 t
Basic unit of final disposal amount	3.0 t/100 million yen

*1: The amount of energy was calculated based on a sampling survey.
*2: The total of head office and branch buildings, etc.
*3: The works completed in FY 2019 were totaled.
*4: The total of construction works (completed construction + continuing construction) in FY 2019.
*5: Only draining to a sewage system is considered.